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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|-------------------|
| 09/937,572 | 01/23/2002 | Denis Fauconnier | 0522-1757 | 2507 |
| 7590 | 06/07/2005 | | EXAMINER | |
| William M Lee Jr Lee Mann Smith McWilliams Sweeney & Ohlson PO Box 2786 Chicago, IL 60690-2786 | | | | MILLER, BRANDON J |
| | | ART UNIT | PAPER NUMBER | 2683 |

DATE MAILED: 06/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | |
|------------------------------|------------------------|---------------------|
| Office Action Summary | Application No. | Applicant(s) |
| | 09/937,572 | FAUCONNIER, DENIS |
| | Examiner | Art Unit |
| | Brandon J Miller | 2683 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 30 December 2004.

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 18-36 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 18-36 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

| | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date: _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date: _____ | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 18-22, 25-28 and 30-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hakkinen in view of Krishnamurthi.

Regarding claim 18 Hakkinen teaches a method of operating a telecommunications system in which mobile terminals communicate with base station transceivers over an air interface (see abstract and col. 3, lines 60-65). Hakkinen teaches a communication to another user terminal being supported in macro diversity by radio links between a plurality of base station transceivers and a mobile terminal (see abstract, col. 2, lines 62-65 and col. 5, lines 7-11). Hakkinen teaches transmitting a radio link message to each of the plurality of base station transceivers and the mobile terminal (see col. 6, lines 2-9 & 50-52). Hakkinen teaches waiting before implementation of the radio link until an acknowledgement has been received from at least one base station transceiver in transmitting communication with the mobile terminal (see col. 6, lines 2-9). Hakkinen teaches at least one base station transceiver in receiving communication with the mobile terminal and the mobile terminal (see col. 5, lines 7-13). Hakkinen does not specifically teach a set of common radio link configuration parameters or a radio link configuration change message. Krishnamurthi teaches a message including a set of

common radio link configuration parameters and dynamically updating radio link configuration parameters (see abstract, col. 6, lines 66-67 and col. 7, lines 1-12 & 39-47). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the device adapt to include a set of common radio link configuration parameters and a radio link configuration change because this would allow for reduced connection interference in a macro diversity system for wireless communication.

Regarding claim 19 Hakkinen teaches waiting for results from a base station transceiver in receiving communication with the mobile terminal, which provides a minimum quality of service (see col. 6, lines 59-67 and col. 7, lines 1-2).

Regarding claim 20 Hakkinen and Krishnamurthi teach a device as recited in claim 18 except for transmitting a radio link configuration apply message after receipt of the confirmation message. Hakkinen does teach establishing a radio link connection after receipt of a response message (see col. 2-9 & 12-16). It would have been obvious to one or ordinary skill in the art at the time the invention was made to make the device adapt to include transmitting a radio link configuration apply message after receipt of the confirmation message because this would allow for efficient establishment of multiple connections between a mobile unit and a plurality of base stations.

Regarding claim 21 Hakkinen and Krishnamurthi teach a device as recited in claim 20 except for an apply message that is transmitted first to the mobile terminal for application of the new configuration to uplink messages from the mobile terminal, and the apply message is transmitted to the base station transceivers for application of the new configuration to transmissions in the downlink only after receipt of uplink transmissions in accordance with the

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new configuration. Hakkinen does teach a signal that is transmitted first to a mobile terminal for application of the new connection request from the mobile terminal (see col. 6, lines 1-2).

Hakkinen does teach a message transmitted to the base station transceivers for application of the new connection to transmissions in the downlink only after a response of uplink transmissions in accordance with the new connection (see col. 6, lines 2-9 & 12-16). Krishnamurthi does teach a message including a set of common radio link configuration parameters (see abstract, col. 6, lines 66-67 and col. 7, lines 1-12 & 39-47). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the device adapt to include an apply message that is transmitted first to the mobile terminal for application of the new configuration to uplink messages from the mobile terminal, and the apply message is transmitted to the base station transceivers for application of the new configuration to transmissions in the downlink only after receipt of uplink transmissions in accordance with the new configuration because this would allow for the efficient establishment of multiple connections between a mobile unit and a plurality of base stations.

Regarding claim 22 Krishnamurthi teaches a change in configuration that is detected by a change in a property of received signals (see col. 6, lines 66-67 and col. 7, lines 1-6).

Regarding claim 23 Hakkinen and Krishnamurthi teach a device as recited in claim 22 except for the property is the polarity of error detection data. Rahman does teach error detection data (see col. 5, lines 27-31). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the device adapt to include the property is the polarity of error detection data because this would allow for reduced connection interference in a macro diversity system for wireless communication.

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Regarding claim 25 Hakkinen teaches a radio link parameter that includes at least one of transport block size, transport block set size, transmission time interval, type of channel coding, type of channel interleaving, rate matching or a combination of these (see col. 4, lines 46-55).

Regarding claim 26 Hakkinen teaches a telecommunications system in which mobile terminals communicate with base station transceivers over an air interface (see abstract and col. 3, lines 60-65). Hakkinen teaches a communication between a mobile terminal in macro diversity and another user terminal being connected by radio links to a plurality of base station transceivers (see abstract, col. 2, lines 62-65 and col. 5, lines 7-11). Hakkinen teaches network elements from transmitting a radio link message to each of the plurality of base station transceivers and the mobile terminal (see col. 6, lines 2-9 & 50-52). Hakkinen teaches waiting before application of the radio link until an acknowledgement of the receipt of the message from at least one base station transceiver in transmitting communication with the mobile terminal (see col. 6, lines 2-9). Hakkinen teaches at least one base station transceiver in receiving communication with the mobile terminal and the mobile terminal (see col. 5, lines 7-13). Hakkinen does not specifically teach a set of common radio link configuration parameters or a radio link configuration change message. Krishnamurthi teaches a message including a set of common radio link configuration parameters and dynamically updating radio link configuration parameters (see abstract, col. 6, lines 66-67 and col. 7, lines 1-12 & 39-47). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the device adapt to include a set of common radio link configuration parameters and a radio link configuration change because this would allow for reduced connection interference in a macro diversity system for wireless communication.

Regarding claim 27 Hakkinen and Krishnamurthi teach a device as recited in claim 19 and is rejected given the same reasoning as above.

Regarding claim 28 Krishnamurthi teaches the mobile terminal that is adapted to change a property of transmissions on change of the uplink configuration (see abstract, col. 6, lines 66-67 and col. 7, lines 1-12 & 39-47).

Regarding claim 30 Hakkinen and Krishnamurthi teach a device as recited in claim 20 and is rejected given the same reasoning as above.

Regarding claim 31 Hakkinen and Krishnamurthi teach a device as recited in claim 21 and is rejected given the same reasoning as above.

Regarding claim 32 Hakkinen teaches a network element for use in a telecommunications system in which mobile terminals communicate with base station transceivers over an air interface (see abstract, col. 3, lines 60-65, and col. 5, lines 1-5). Hakkinen teaches a communication between a mobile terminal in macro diversity and another user terminal being connected by radio links to a plurality of base station transceivers (see abstract, col. 2, lines 62-65 and col. 5, lines 7-11). Hakkinen teaches network elements adapted for transmitting a radio link message to each of the plurality of base station transceivers and the mobile terminal (see col. 6, lines 2-9 & 50-52). Hakkinen teaches waiting before application of the radio link for an acknowledgement of the receipt of the message from at least one base station transceiver in transmitting communication with the mobile terminal (see col. 6, lines 2-9). Hakkinen teaches at least one base station transceiver in receiving messages from the mobile terminal and the mobile terminal (see col. 6, lines 3-5 & 50-52). Hakkinen does not specifically teach a set of common radio link configuration parameters or a radio link configuration change message. Krishnamurthi

teaches a message including a set of common radio link configuration parameters and dynamically updating radio link configuration parameters (see abstract, col. 6, lines 66-67 and col. 7, lines 1-12 & 39-47). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the device adapt to include a set of common radio link configuration parameters and a radio link configuration change because this would allow for reduced connection interference in a macro diversity system for wireless communication.

Regarding claim 33 Hakkinen and Krishnamurthi teach a device as recited in claim 19 and is rejected given the same reasoning as above.

Regarding claim 34 Hakkinen teaches a method of operating a network element for use in a telecommunications system in which mobile terminals communicate with base station transceivers over an air interface (see abstract, col. 3, lines 60-65, and col. 5, lines 1-5). Hakkinen teaches a communication between a mobile terminal in macro diversity and another user terminal being connected by radio links to a plurality of base station transceivers (see abstract, col. 2, lines 62-65 and col. 5, lines 7-11). Hakkinen teaches network elements adapted for transmitting a radio link message to each of the plurality of base station transceivers and the mobile terminal (see col. 6, lines 2-9 & 50-52). Hakkinen teaches waiting before applying the radio link until an acknowledgement of the receipt of the message from at least one base station transceiver in transmitting communication with the mobile terminal (see col. 6, lines 2-9). Hakkinen teaches at least one base station transceiver in receiving messages from the mobile terminal and the mobile terminal (see col. 6, lines 3-5 & 50-52). Hakkinen does not specifically teach a set of common radio link configuration parameters or a radio link configuration change message. Krishnamurthi teaches a message including a set of common radio link configuration

parameters and dynamically updating radio link configuration parameters (see abstract, col. 6, lines 66-67 and col. 7, lines 1-12 & 39-47). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the device adapt to include a set of common radio link configuration parameters and a radio link configuration change because this would allow for reduced connection interference in a macro diversity system for wireless communication.

Regarding claim 35 Hakkinen and Krishnamurthi teach a device as recited in claim 19 and is rejected given the same reasoning as above.

Regarding claim 36 Hakkinen teaches a mobile terminal for use in a telecommunications system in which the mobile terminal may communicate with base station transceivers over an air interface (see abstract and col. 3, lines 60-65). Hakkinen teaches a communication to another user terminal being supported in macro diversity by radio links between a plurality of base station transceivers and a mobile terminal (see abstract, col. 2, lines 62-65 and col. 5, lines 7-11). Hakkinen teaches the mobile terminal being adapted to receive a message (see col. 6, lines 4-9). Hakkinen teaches a mobile terminal transmitting a response to a message (see col. 6, lines 1-4). Hakkinen teaches applying a new connection on transmissions after receipt of a reply message (see col. 6, line 5-9). Hakkinen does not specifically teach a set of common radio link configuration parameters, or a mobile terminal applying a new common configuration on uplink transmissions after receipt of a configuration apply message. Krishnamurthi teaches a mobile terminal being adapted to receive a radio link configuration change message (see col. 7, lines 38-47). Krishnamurthi teaches a message including a set of common radio link configuration parameters and a mobile terminal applying new common configuration parameters on uplink

transmissions (see abstract, col. 6, lines 66-67 and col. 7, lines 1-12 & 39-47). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the device adapt to include a set of common radio link configuration parameters or a mobile terminal applying a new common configuration on uplink transmissions after receipt of a configuration apply message because this would allow for reduced connection interference in a macro diversity system for wireless communication.

Claim 23-24 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hakkinen in view of Krishnamurthi and Lee.

Regarding claim 23 Hakkinen and Krishnamurthi teach a device as recited in claim 22 except for the property is the polarity of error detection data. Lee teaches a check on data generation (see col. 8, lines 39-46). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the device adapt to include the property is the polarity of error detection data because this would allow for reduced connection interference in a macro diversity system for wireless communication.

Regarding claim 24 Hakkinen and Krishnamurthi teach a device as recited in claim 18 except for radio links included dedicated channels for the transmission of control data and user data between the mobile terminal and the plurality of base station transceivers, and transmissions on the dedicated channels include a transmit format combination indicator for indicating the currently valid combination of common transmission parameters of the radio links. Lee teaches radio links included dedicated channels for the transmission of control data and user data between the mobile terminal and the base station transceivers (see abstract and col. 2, lines 22-27). Lee teaches transmissions on the dedicated channel that includes an indicator for indicating

a transmission parameter of the radio link (see col. 7, lines 36-42). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the device adapt to include radio links included dedicated channels for the transmission of control data and user data between the mobile terminal and the plurality of base station transceivers, and transmissions on the dedicated channels include a transmit format combination indicator for indicating the currently valid combination of common transmission parameters of the radio links because this would allow for increased channel efficiency in macro diversity communication systems.

Regarding claim 29 Hakkinen, Krishnamurthi, and Lee teach a device as recited in claim 23 and is rejected given the same reasoning as above.

Response to Arguments

Applicant's arguments with respect to claims 18-36 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Rinne et al. U.S Patent No. 6,574,473 discloses a method and system for controlling radio communications network and radio network controller.

Chheda et al. U.S. Patent No. 6,038,448 discloses a wireless communication system having hand-off based upon relative pilot signal strengths.

Johansson et al. U.S. Patent No. 6,341,124 discloses accommodating packet data loss at base stations interfacing between a packet switched network and a CDMA macro diversity network.

Hamabe et al. U.S. Patent No. 6,351,651 discloses a method of controlling transmission power in a cellular type mobile communication system.

CHAMBERT WO 96/18277 discloses up link macro diversity method and apparatus in a digital mobile radio communication system.

Willey U.S. Patent No. 6,505,058 discloses a method for determining whether to wake up a mobile station.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brandon J Miller whose telephone number is 703-305-4222. The examiner can normally be reached on Mon.-Fri. 8:00 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Trost can be reached on 703-308-5318. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


May 23, 2005


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TECHNOLOGY CENTER 2600